010-06-P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

49 CFR Part 223

[Docket No. FRA-2020-0058; Notice No. 2]

RIN 2130-AC76

Safety Glazing Standards; Codifying Existing Waivers and Adding Test Flexibility

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: FRA is amending its Safety Glazing Standards for exterior windows on railroad equipment to codify long-standing waivers, add a new testing option to improve consistency of glazing testing, and revise outdated section headings. The changes update and clarify existing requirements to maintain and, in some cases, enhance safety, while reducing unnecessary costs. Codification of the waivers is also consistent with the Infrastructure Investment and Jobs Act and will enable FRA to use its inspection resources more efficiently.

DATES: This final rule is effective [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

ADDRESSES: *Docket*: For access to the docket to read background documents or comments received, go to https://www.regulations.gov and follow the online instructions for accessing the docket.

FOR FURTHER INFORMATION CONTACT: Gary Fairbanks, Staff Director, Office of Railroad Safety, telephone: 202-493-6322, email: gary.fairbanks@dot.gov; or Michael Masci, Senior Attorney, Office of the Chief Counsel, telephone: 202-493-6037, email: michael.masci@dot.gov.

SUPPLEMENTARY INFORMATION:

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I. Executive Summary

Purpose of the Regulatory Action

FRA periodically reviews, and proposes amendments to, its regulations to identify ways to enhance safety and streamline and update regulatory requirements. Various Executive orders also encourage or require such reviews with an emphasis on cost-savings.[1] This rule will maintain and, in some cases, enhance safety, while allowing FRA to make better use of its inspection resources, and reducing unnecessary costs.

This rule also responds to the mandate of section 22411 of the Infrastructure

[1] *See*, *e.g.*, Executive Order 13610, Identifying and Reducing Regulatory Burdens, 77 FR 28469, May 10, 2012; Executive Order 13563, Improving Regulation and Regulatory Review, 76 FR 3821, Jan. 21, 2011.

Investment and Jobs Act (IIJA; Pub. L. 117-58). Section 22411 requires the Secretary to review and analyze existing waivers issued under 49 U.S.C. 20103 that have been in continuous effect for a 6-year period to determine whether issuing a rule consistent with the waiver is in the public interest and consistent with railroad safety. The Secretary has delegated authority to implement section 22411 to FRA.[2] The notice of proposed rulemaking (NPRM) contained FRA's analysis of the waivers and FRA has concluded that it is in the public interest and consistent with railroad safety to incorporate into the regulations the relevant aspects of the waivers analyzed.

FRA is adopting this rule as effective on date of publication consistent with 5 U.S.C. 553(d)(1), as it is "a substantive rule which grants or recognizes an exemption or relieves a restriction."

Summary of the Regulatory Action

The Safety Glazing Standards (or part 223) contain minimum safety requirements for glazing materials in the windows of locomotives, passenger cars, and cabooses. FRA issued an NPRM on April 18, 2022,[3] proposing to codify long-standing waivers, add a new testing option to improve consistency of glazing testing, and revise outdated section headings. APTA submitted the only comment in response to the NPRM. APTA's comment expressed support for FRA's proposal to incorporate the identified waivers into the regulations and, generally, for the new testing option. APTA raised a technical concern, however, about the new testing option (discussed in more detail in Section III below). After carefully considering APTA's comment, FRA is issuing this final rule substantially as proposed, with only minor modifications to FRA's proposed revisions to appendix A to part 223 (appendix A) to make clear that the use of any structurally sound cinder block, meeting the required dimensions of the appendix, is allowable for the large

[2] 49 CFR 1.89(a).
[3] 87 FR 22847.

object impact test.

As proposed in the NPRM, this rule codifies sixty-eight long-standing waivers[4] that have provided certain older railroad equipment relief from FRA's glazing requirements. Specifically, this final rule excludes from compliance with part 223 all locomotives, cabooses, and passenger cars built or rebuilt prior to July 1, 1980, that are operated at speeds not exceeding 30 mph, and are used only where the risk of propelled or fouling objects striking the equipment is low. Codifying these waivers through this rulemaking proceeding[5] continues the high level of safety achieved under the waivers. It also allows FRA additional flexibility to use its inspection resources and reduces the regulatory burden on the railroad industry by eliminating the need to continue to use the waiver process for relief, while providing the railroad industry with regulatory certainty as to the applicability of part 223 to certain older equipment.

This rule also adopts the NPRM's proposal to revise appendix A to allow the use of a steel ball as an alternative to a cinder block for conducting the large object impact test appendix A requires. As explained in the NPRM, appendix A contains the performance criteria and the testing methodology for required glazing materials. Specifically, appendix A requires glazing materials to be subjected to two tests: ballistic impact and large object impact. Historically, the large object impact test in appendix A has required the use of a 24-lb cinder block of specific dimensions. As noted in the NPRM, in the early 2000s, FRA became aware that cinder blocks of the weight and dimensions appendix A requires were no longer being manufactured and accordingly were becoming harder for the glazing manufacturing and railroad industries to find.

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[4] FRA currently oversees 68 glazing-related waivers issued to 58 different railroads that involve equipment built or rebuilt before July 1, 1980, that will be codified by this rule. For review, FRA placed a list of these waivers in the rulemaking docket. FRA monitors a railroad's compliance with each waiver and every five years upon the railroad's request, FRA reviews existing waivers for possible renewal. Table F, Government Administrative Net Benefits by Year, provides the number of waivers by year that absent this rule FRA would expect to review from 2021 to 2031 or over a 10-year period of analysis.

[5] Existing waivers could potentially be codified through the rulemaking process, as here, or they could be codified through legislation.

Because, as discussed in detail in Section III.B of the NPRM's preamble, and in Section III below, the steel ball test is at least equivalent to the existing cinder block test appendix A has historically required, safety will be maintained, and in some respects, enhanced, by the standardization the steel ball test provides.

As relevant to the existing cinder block test appendix A has historically required, in the NPRM FRA proposed to incorporate by reference two American Society for Testing and Materials[6] (ASTM) specifications (ASTM specifications C33/C33M-18 and C90-16a) to ensure proper cement construction and integrity of the blocks. Upon further review and consideration, however, FRA recognizes that other concrete compositions can be used to construct structurally sound cinder blocks. Accordingly, FRA is not adopting the NPRM's proposal to incorporate by reference the two ASTM standards, which would have required cinder blocks to meet those standards to be used for testing under appendix A. Instead, FRA is revising appendix A to make clear that any structurally sound cinder blocks may be used to meet the testing requirements of appendix A and ASTM specifications C33/C33M-18 and C90-16a are merely examples of compositions known to be structurally sound.

Finally, FRA is revising several section headings in part 223 to replace terms that have become outdated. As noted in the NPRM, since 1979, when FRA first published part 223, use of the terms "new" and "existing" in various section headings has become confusing. Accordingly, for clarity, FRA is amending the section headings to refer to the relevant compliance dates for each section.

Costs and Benefits of the Regulatory Action

This final rule will result in three quantifiable benefits. First, this final rule will eliminate the need for certain railroads to submit waiver petitions from part 223. Second, this final rule revises appendix A to allow manufacturers to use a steel ball as an

[6] The organization is currently known as ASTM International.

alternative to a cinder block when conducting the large object impact test. Lastly, this final rule will result in net benefits to FRA because FRA subject matter experts no longer need to review renewal glazing standards waivers made unnecessary by the final rule.

FRA estimates there are no costs associated with implementing this final rule. As shown in the following table, FRA's estimates that this final rule will result in a net benefits of $946,000 (Present Value (PV), 3%) or $769,000 (PV, 7%).

Total Net Benefits, 10-Year Period of Analysis, rounded to $1,000 (2020 Dollars)

Type of Benefit	Undiscounted	Present Value		Annualized	
		3%	7%	3%	7%
Railroads (Waiver Submissions)	$ 43,000	$ 37,000	$ 30,000	$ 4,000	$ 4,000
Manufacturers (Steel Ball Option)	77,000	65,000	54,000	8,000	8,000
Government (FRA Waiver Review)	1,000,000	844,000	685,000	99,000	98,000
Total Net Benefits	$ 1,121,000	$ 946,000	$ 769,000	$ 111,000	$ 109,000

II. Background

The NPRM discussed in detail the background of FRA's existing glazing requirements, from FRA's initial issuance of the requirements in 1979 through amendments made in 2016 to exclude certain equipment that is more than 50 years old and, except for incidental freight service, used only for excursion, educational, recreational, or private transportation purposes. The NPRM also explained in detail FRA's waiver process and described the scope of existing glazing-related waivers under which individual railroads currently operate. Since 1998, FRA granted conditional relief from part 223 to approximately 200 small railroads that operate older equipment under certain circumstances (i.e., at low speeds and in geographical locations with no history of broken windows and low risk of future vandalism to railroad equipment). As of the date of the NPRM, FRA oversaw 68 glazing-related waivers. In granting these waivers, the NPRM explained FRA's Railroad Safety Board (Board) reviewed available records and

found the specific railroad operations and operating environment of each railroad demonstrated no history of injuries resulting from windows breaking on their equipment and low risk of any future injuries (i.e., no or few reported incidents of vandalism, no history of windows broken from propelled or fouling objects). In addition, as noted in the NPRM, the Board consistently found that, due to rising prices for materials and labor, and modifications that are necessary to adapt the window frames in the older equipment to support the increased thickness and weight of glazing in modern window designs, requiring railroads with older equipment and limited operations (such as those railroads that are party to the existing glazing waivers referenced in footnote 9 (87 FR 22848)) to install certified glazing would be cost-prohibitive and of limited benefit. See the discussion of Executive Order 12866 in Section V below.

Given the rail industry's long-term success in safely operating under these waivers, and considering APTA's comment in support, FRA is incorporating the regulatory flexibility provided by the waivers into part 223. This change will eliminate the need for further waivers and the associated employee hours spent on their documentation and renewal every five years, as well as remove any industry uncertainty as to whether FRA would renew the waivers.

III. Discussion of APTA's Comment

In its comment, APTA expressed general support for FRA's proposal to exclude from part 223 older equipment operated at only low speeds in locations with low risk of objects striking equipment, recognizing the regulatory relief it will provide for its members. Based on an analysis of data in FRA's publicly available Railroad Accident/Incident Reporting System, APTA also expressed the view that the current 24-lb cinder block test "appears to be adequate" to prevent serious incidents resulting from glazing being compromised. However, APTA expressed concern that the proposed steel ball test is more stringent than the cinder block test. APTA asserted that the "proposed

12-pound steel sphere test is more demanding than the current cinder block testing because not all the kinetic energy is imparted to the glazing sample being tested since the cinder block itself consumes some of the kinetic energy as it breaks apart upon contact with the glazing."

Given their premise that the steel ball test is more stringent than the cinder block test, APTA also expressed concern that if a railroad qualifies glazing using the cinder block test method, instead of the more stringent steel ball method, a railroad may be held liable for damages or injuries if the glazing is compromised.

Additionally, APTA generally asserted that the proposed alternative steel ball test will require railroad equipment to be re-designed or retrofitted to potentially accommodate thicker glass to pass the more stringent steel ball test. Although APTA generally asserted that equipment will need to be redesigned and retrofitted because a "thicker piece of glazing may be required," APTA's comment did not provide any evidence or analysis to support this assertion. The comment did not specify what adjustments to railroad equipment or glazing material APTA believes would potentially be needed. APTA noted, however, that it has an industry working group currently working on establishing a method to scale the kinetic energy for the large object impact test to account for the kinetic energy that is typically absorbed by the cinder block when the block impacts the glazing. In other words, FRA understands that APTA has a working group charged with researching and developing an equivalent testing method to the cinder block test.

Accordingly, for each of the reasons outlined in its comment, APTA recommended that FRA reconsider its methodology and identify an alternative test method that provides an equivalent, not more stringent, level of safety, potentially incorporating results from its working group.

As acknowledged in the NPRM, FRA agrees with APTA that the steel ball test

may be more stringent than the cinder block test.[7] However, that is not a reason, in itself, to forgo adding the proposed steel ball test as an alternative testing methodology. FRA's primary purpose for adding the steel ball test is to ensure safety is not diminished, and, where possible, to enhance safety. Adding a test option that is potentially more stringent will ensure the current level of safety is maintained or enhanced. In addition, FRA finds that adding the proposed steel ball test provides needed flexibility for manufacturers, and any others, responsible for testing glazing material, particularly given that cinder blocks of the weight and dimensions required by part 223 are no longer being manufactured. FRA expects glazing manufacturers may use the steel ball test because the steel ball is easier to acquire than a conforming cinder block and the steel ball test will result in net benefits as compared to the cinder block test. If a glazing manufacturer decides not to use the steel ball test, because it is too stringent or for any other reason, the cinder block test will remain in part 223 as an acceptable means to qualify glazing materials. As such, while the steel ball test may be more stringent than the cinder block test, it will not have any significant impact on manufacturing.

The precise legal nature of APTA's liability concerns is unclear. FRA's allowance of an alternative testing methodology would not create a difference in liability based on the use of one test over another. Part 223 does not provide for a private right of action for damages for non-compliance.[8] Additionally, negligence *per se* is available as a legal claim only when a regulation is violated.[9] As proposed in the NPRM, a

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[7] 87 FR 22852 (noting that the results of testing by the John A. Volpe National Transportation Systems Center (Volpe Center) indicated that the steel ball test is "potentially a more stringent test than the cinder block test").

[8] *See Touche Ross & Co. V. Redington*, 442 U.S. 560, 568 (1979) (finding that a private right of action is not automatically available following a Federal statutory violation unless the legislature intended to create such a right); *FDIC v. Schuchmann*, 235 F.3d 1217, 1223 (10th Cir. 2000) (finding that a statutory violation could not provide the basis for negligence per se if it is contrary to legislative intent); *Schwartzman, Inc. V. Atchison, T.& S.F. Ry.*, 857 F.Supp. 838, 847 (D.N.M. 1994) (listing legislative intent as a factor used by courts to establish whether a private right of action like negligence per se may be properly brought).

[9] *See, e.g.*, *Schwartzman, Inc.*, 857 F.Supp. at 847 ("The doctrine of negligence *per se* dictates that applicable statutes constitute the governing standard of care, and violation of those statutes is negligence as a matter of law.").

manufacturer could comply with part 223 by qualifying glazing material using either the cinder block or steel ball test. If a manufacturer chose to comply using the cinder block test, there would be no violation to support a negligence *per se* claim. Thus, it is unclear how using a compliant test would result in undue liability as APTA alleges in its comments.[10] However, according to the general principles of tort law, negligence may be available as a claim if either test is performed incorrectly, and a resulting injury occurs; these principles are true regardless of this rule.[11]

FRA also determined that APTA's general comment about the need for the redesign or retrofitting of equipment to accommodate thicker glass is without merit. APTA's comment does not provide evidence or detailed analysis to support this assertion. The comment does not specify what adjustments to railroad equipment would be needed, and APTA does not provide an estimate for how thick the glass would need to be or dimensions for railroad equipment designed to secure the glass. Moreover, as APTA acknowledges in its comment, it is not clear that the glass would need to be thicker.[12] Based on the results of the Volpe Center report referenced in the NPRM, FRA does not expect that any retrofitting will be required.[13]

FRA appreciates and looks forward to the results of APTA's working group addressing glazing on railroad equipment, but for the reasons noted above, FRA finds

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[10] In fact, although an FRA grant of a waiver petition often results in two separate Federal standards, FRA is not aware of such liability concerns adhering to the Federal standard established by the waiver grant. FRA has authority to waive regulatory requirements if such waiver is in the public's interest and consistent with railroad safety (49 U.S.C. 20103). To ensure waivers are consistent with railroad safety, FRA typically includes conditions to any granted waiver petition, and these conditions may include alternative methods for compliance. At times, FRA has waived regulatory requirements to approve and monitor a test/pilot program to help establish a safe alternative—the alternative being the governing Federal standard.
[11] *See, e.g., Palsgraf v. Long Island R.R. Co.*, Ct. of App. of N.Y., 248 N.Y. 339, 162 N.E. 99 (N.Y. 1928); *Greenman v. Yuba Power Products, Inc.,* 59 Cal.2d 57 (1963).
[12] APTA comment at page 2 (asserting that a thicker piece of glazing "may" be required as a result of the steel ball test).
[13] The Volpe Center report, summarized in the NPRM, shows that the glazing samples tested that withstood the cinder block test also withstood the steel ball test when a spall shield was added. The spall shield was less than a millimeter thick. Based on the Volpe Center research, if a manufacturer adds a spall shield to glazing material that passes the cinder block test, it will pass the steel ball test and have no impact on its installation on railroad equipment, whether or not it would otherwise require a spall shield to pass the steel ball test.

that allowing for the alternative steel ball testing methodology as proposed in the NPRM is in the best interests of safety at this time. The alternative testing methodology will provide industry flexibility needed to continue testing in a standardized and repeatable way under appendix A, and accordingly, this final rule adopts the alternative steel ball testing methodology as proposed in the NPRM.

IV. Section-by-Section Analysis

As noted above, with one exception (noted in the analysis of appendix A below), FRA is adopting the proposals set forth in the NPRM without change.

This section-by-section analysis is intended to explain the rationale for each revised or new provision of the rule. The regulatory changes are organized by section number and with the exception of the analysis of appendix A, the analyses below are consistent with those included in the NPRM.

§ 223.3 Application

Section 223.3 sets forth the scope and applicability of part 223. Former paragraph (b) excluded from part 223's applicability certain types of equipment and operations. For the reasons explained in the NPRM, this final rule adds new paragraph (b)(5) to exclude locomotives, cabooses, and passenger cars built or rebuilt prior to July 1, 1980, that are operated at speeds not exceeding 30 mph, and used only where there is low risk of propelled or fouling objects striking the equipment. Risk factors include reported incidents of propelled or fouling objects striking rail equipment, or infrastructure conditions or other operating environment conditions that have led or are likely to lead to objects striking rail equipment in operation. Paragraph (b)(5) provides that risk is presumed low, unless the railroad operating the equipment has knowledge, or FRA makes a showing, that specific risk factors exist. As explained in the NPRM, FRA will determine whether there is low risk primarily based on FRA's observations during routine inspections and from any reported incidents of propelled or fouling objects

striking rail equipment in operation, and FRA expects the operating railroad to inform FRA of any such incidents known to the railroad. If FRA has reason to believe there have been incidents of propelled or fouling objects striking equipment in operation, FRA may investigate further. As part of its investigation, FRA may contact local law enforcement for more information, in determining the risk level.

§ 223.9 Requirements for Equipment Built or Rebuilt After June 30, 1980

As proposed in the NPRM, this final rule revises the heading of this section to reflect the requirements of the section more accurately (i.e., to reflect that the section applies to equipment built or rebuilt after June 30, 1980).

§ 223.11 Requirements for Locomotives Built or Rebuilt Prior to July 1, 1980

Similar to the revisions to § 223.9 discussed directly above, this final rule revises the heading of this section to reflect the requirements of the section more accurately (i.e., to reflect that the section applies to locomotives built or rebuilt prior to July 1, 1980).

§ 223.13 Requirements for Cabooses Built or Rebuilt Prior to July 1, 1980

Similar to the revisions to §§ 223.9 and 223.11 discussed directly above, this final rule revises the heading of this section to reflect the requirements of the section more accurately (i.e., to reflect that the section applies to cabooses built or rebuilt prior to July 1, 1980).

§ 223.15 Requirements for Passenger Cars Built or Rebuilt Prior to July 1, 1980

Similar to the revisions to §§ 223.9, 223.11, and 223.13 discussed directly above, this final rule revises the heading of this section to reflect the requirements of the section more accurately (i.e., to reflect that the section applies to passenger cars built or rebuilt prior to July 1, 1980).

Appendix A to Part 223—Certification of Glazing Materials

As discussed above, and as proposed in the NPRM, FRA is revising this appendix to provide the option to use a 12-lb steel ball as an alternative to a 24-lb cinder block for

large object impact testing when certifying glazing under part 223. In doing so, FRA is making miscellaneous, conforming changes to existing requirements. A detailed analysis of those changes is included in the NPRM document, with the only difference being the changes to paragraphs b.(10) and (11) adopted in this final rule.

In the NPRM, FRA proposed to revise paragraphs b.(10) and (11), to incorporate by reference ASTM standards C90-16a, "Standard Specification for Loadbearing Concrete Masonry Units," 2016, and ASTM C33/33M-18, "Standard Specification for Concrete Aggregates," 2018. In proposing to incorporate these standards by reference, FRA noted that both specifications "provide options for the precise cinder block makeup used in the large object impact tests." After further consideration, however, FRA recognizes that other concrete compositions can be used to construct structurally sound cinder blocks. Accordingly, FRA is not adopting the NPRM's proposal to incorporate by reference ASTM standards C90-16A and C33/C33M-18. Instead, FRA is revising paragraphs b.(10) and (11) to make clear that any structurally sound cinder blocks may be used to meet the testing requirements of appendix A and to identify the two ASTM standards as examples of compositions known to be structurally sound.

V. Regulatory Impact and Notices

A. Executive Order 12866

This final rule is a nonsignificant regulatory action under Executive Order 12866, "Regulatory Planning and Review." FRA made this determination by finding that the economic effects of this final rule will not exceed the $100 million annual threshold defined by Executive Order 12866. FRA estimates that over a ten-year period of analysis this final rule will at least maintain, and possibly enhance, safety, while also providing net benefits for both the industry and FRA.

This final rule amends part 223 in two substantive ways. First, this final rule codifies long-standing waivers that exclude old rail equipment from the certified safety

window glazing requirements, provided the railroads that use such equipment comply with FRA-required operating conditions. Second, this final rule adds a steel ball test option to appendix A that a manufacturer may use in lieu of the currently specified cinder block test option.

FRA complied with Office of Management and Budget (OMB) Circular A-4 when accounting for benefits, costs, and net benefits relative to a baseline condition. Typically, a baseline condition represents a best judgement about what the world would look like in absence of the regulatory intervention.[14] Without this final rule, small railroads that operate under part 223 waiver exemption would every five years need to apply for a renewal of their part 223 waiver exemption. Also, without this final rule manufacturers would continue using a customized cinder block when performing Type I and Type II large object impact tests to certify that new window glazing materials are part 223 complaint.

Waivers from Part 223

As discussed above in "II. Background," the Safety Board found that mandating railroads with older equipment install certified glazing would be cost-prohibitive. Such costs would include materials and labor costs, including the costs to remove existing window frames in older equipment and replace them with new frames that are compatible with compliant glazing to support the increased thickness and weight of glazing in modern window designs. The cost to install certified glazing may exceed the value of the rail equipment itself. Moreover, FRA expects that even if such installation took place, limited safety-related benefits would follow, because older equipment generally operates at low speeds and in areas with low safety risk. For these reasons, FRA previously granted these part 223 waiver requests.

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[14] "Circular A-4: Regulatory Analysis" (Sep. 17, 2003), available at https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4. *See Section E(2) Developing a Baseline.*

When estimating benefits and costs that comes from the final rule, this analysis assumed a baseline where FRA's approval of part 223 waivers resembles historical practice. Historically, FRA reviews two types of waivers: (1) ongoing or long-standing waivers[15] and (2) test, pilot waivers, or waivers that FRA approved for a period of time less than 10 years. Long-standing waivers cover more familiar and proven technology and have previously undergone the renewal process. Renewal requests for long-standing waivers require less effort for applicants and FRA, as compared to renewal requests for waivers. For this economic analysis, FRA defines long-standing waivers as any active waiver that FRA approved for a period of time of 10 years or longer. Test or pilot waivers, or waivers that FRA approved for a period of time less than 10 years, require extensive technical analysis and investigation by stakeholders during the initial waiver application and first waiver renewal.

A waiver's benefits and costs are based on industry application of technologies and procedures, which are presumably less restrictive than the underlying regulation. However, continuation of a waiver (and the associated net benefits and regulatory relief) is subject to the uncertainty regarding whether FRA will approve the waiver renewal request during the periodic waiver review process. Currently, only Class III railroads operated rail equipment under waiver from part 223. Based upon previous requests of waiver from part 223, FRA estimates the final rule will provide net benefits to 58 of the 733 (8 percent) Class III railroads.[16]

Long-standing waivers (i.e., active waivers that FRA initially approved more than 10 years ago) from part 223 reflect familiar uncertified glazing technologies and safe

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[15] FRA has recently used the term "long-standing" waivers in the rule on "Miscellaneous Amendments to Brake System Standards and Codification of Waivers," 85 FR 80544 (Dec. 11, 2020). See also the rule's corresponding regulatory impact analysis (RIA) in www.regulations.gov, docket no. FRA-2018-0093, notice no. 2, document "2130-AC67 final rule RIA to 12-10-2020."

[16] Based on the railroads that are required to report accident/incidents to FRA under part 225, as of 2021 FRA estimates there are approximately 768 Class III railroads, with 733 of them operating on the general system.

operating conditions for which FRA has granted short line railroads waiver renewals. Because railroads operated under uncertified window glazing permitted by waivers under FRA-required operating conditions for a long time, they have essentially "built-in" these waivers into their business practices. FRA historic inspection data indicates that railroads have operated safely with these waivers for approximately 25 years, so it is reasonable to assume that FRA would continue to approve any such waiver renewal request going forward. In a world without this final rule, or the baseline condition, the continuation of these long-standing waivers is a reasonable estimation. Therefore, a net benefit that comes from this final rule is the reduced burden on Class III railroads to submit part 223 waiver renewal requests for long-standing waivers and the reduced burden on FRA to process such waiver renewal requests.

Costs for railroads to renew more recent waivers (i.e., test, pilot waivers, or waivers that FRA approved for less than 10 years) are higher than the costs for renewing long-standing waivers. First, more recent waivers are subject to more extensive review and analysis. FRA may also modify conditions of more recent waivers by imposing restrictions to maintain and in some cases enhance safety. Second, more recent waiver renewal requests include a degree of uncertainty, because FRA's renewal of more recent waivers is not assured. Therefore, this analysis estimates the impact from codifying more recent waivers as the costs and benefits that result from the waiver application process and safety procedures in lieu of the regulatory requirements absent this final rule. This analysis also estimates the reduced burden on FRA associated with processing waiver renewal requests.

Addition of Steel Ball Test Option in Appendix A

This final rule revises appendix A to allow manufacturers to use a steel ball in lieu of a cinder block when conducting Type I and Type II large object impact tests. This revision will not result in any costs, because stakeholders may still use a cinder block

when complying with the large object impact test requirements. However, this analysis determined that after the implementation of this final rule that all manufacturers will use the steel ball test option, as the steel ball test option costs less relative to the existing cinder block test option.

Overall, this analysis found that the final rule will codify window glazing waivers, reduce window glazing manufacturers' window glazing certification costs, and eliminate the Federal Government's requirement to review and approve these waivers. As shown in Table A, issuing the final rule will result in net benefits of $946,000 (Present Value (PV), 3%) and $769,000 (PV, 7%).

Table A. Summary of Total Net Benefits over the 10-Year Period, rounded $1,000 (2020 Dollars)

		Present Value		Annualized	
Type of Benefit	Undiscounted	3%	7%	3%	7%
Railroads (Waiver Submissions)	$ 43,000	$ 37,000	$ 30,000	$ 4,000	$ 4,000
Manufacturers (Steel Ball Option)	77,000	65,000	54,000	8,000	8,000
Government (FRA Waiver Review)	1,000,000	844,000	685,000	99,000	98,000
Total Net Benefits	$ 1,121,000	$ 946,000	$ 769,000	$ 111,000	$ 109,000

Railroad Net Benefits

In 1979, FRA issued part 223 and generally established minimum safety requirements for glazing materials in the windows of locomotives, passenger cars, and cabooses. FRA has traditionally granted waiver requests to small railroads that operate such vehicles in existence at the time the regulation was promulgated, at speeds up to 30 mph, on rail tracks located in areas where railroad reports and FRA observations, as well as police records, show little risk of objects, such as cinder blocks and bullets, striking rail equipment. Once initial waiver requests are approved, recipients must resubmit waiver requests to FRA every five years to continue to operate such vehicles. During the waiver approval process, FRA field inspectors verify safe conditions and contact local

police, if appropriate.[17] FRA historical records of the part 223 waiver approval process confirm that, from 1998 to April 2020, no railroad operating under waiver from part 223's requirements reported any incident resulting from use of windows not conforming to part 223's requirements. Based on this documented safety history and FRA's standard practice for evaluating waiver requests,[18] FRA is confident that codifying window glazing waivers serves the public interest by providing small railroads permanent regulatory relief while preserving safety on the general railroad system. The final rule also adds a steel ball test option to the window glazing certification process. FRA expects this amendment will reduce glazing certification costs.

Immediately prior to this final rule, 58 railroads operated rolling stock under 68 waivers from part 223. Absent this final rule, in order to continue to operate under waiver to part 223, these railroads had to resubmit waiver applications every 5 years. Based on historical waiver application submissions, FRA expects the annual number of part 223 waiver submission would vary over a 10-year period of analysis. For example, there were 8 waiver submissions in 2021 (originated in 2001, 2006, and 2011) and FRA expects that railroads would submit 11 waiver renewal requests in 2022 (originated in 2002, 2007, 2012, and 2017). Over the next 10 years, this analysis estimates that railroads would submit two waiver renewal requests for each active part 223 waiver, or 136 waiver renewal requests over the 10-year period of analysis.[19] For the purpose of estimating net benefits that would come from codifying part 223 waivers, this analysis assumes that year 1 net benefits would follow from the observed number of waiver renewal applications in calendar year 2021. Continuing, this analysis assumes that year 2 net benefits related to codifying part 223 waivers would follow from the anticipated

[17] District inspectors verify safe conditions with the police if they find any evidence window glazing has been damaged or replaced.
[18] Standard operating procedures include periodic updates of the FRA Motive Power and Equipment Compliance Manual, which will be expected with the issuance of this rule.
[19] Total number of waiver renewals: 10-year period = Number of existing waivers (68) * number of waiver renewal requests per waiver (2) = 136.

reduction in wavier renewal applications expected to occur in calendar year 2022. In Table B, FRA presents the railroad industry's net benefits based upon the following inputs.[20]

- There are 68 active waiver exemptions to the glazing standards.
- Over the 10-year period of analysis, railroads will submit two waiver exemption requests for each active waiver exemption to the glazing standards.
- This analysis assumes that Class III railroad administrative burden follows similarly to Class I railroad administrative burden. As such, this analysis used Surface Transportation Board (STB) wage data to estimate the railroad administrative burdened[21] wage rate of $77.44 per hour.[22]
- Each railroad waiver submission requires 4 hours of railroad administrative labor.
- The copying and mailing cost for a waiver renewal submission is $10 per waiver renewal submission.
- Total cost per waiver equals $319.75.[23]

Over the 10-year period of analysis, these Class III railroads will realize a net benefit of about $37,000 (PV, 3%) and $30,000 (PV, 7%).

Table B. Railroad Net Benefits by Year (2020 dollars)

			Discount Rate	
Year	Number of Waivers	Undiscounted	3%	7%
Year 1	8	$ 2,558	$ 2,483	$2,391
Year 2	11	3,517	3,315	3,072
Year 3	14	4,477	4,097	3,654
Year 4	18	5,756	5,114	4,391

[20] Inputs are based on expertise drawn from FRA's Motive Power and Equipment Division, unless otherwise noted.
[21] The "burdened" wage rate multiplies the STB wage rate by a factor of 1.75 to account for fringe and overhead benefits.
[22] Source: STB, 2020, professional and administrative employees, group #200; burdened wage rate = $44.25 * 1.75 benefits rate = $77.44, https://www.stb.gov/reports-data/economic-data/quarterly-wage-ab-data/.
[23] Total costs per waiver renewal submission = 4 (labor hours per waiver) * $77.44 (hourly labor burdened wage rate) + $10 (mailing costs) = $319.75.

Year 5	17	5,436	4,689	3,876
Year 6	8	2,558	2,142	1,705
Year 7	11	3,517	2,860	2,190
Year 8	14	4,477	3,534	2,605
Year 9	18	5,756	4,411	3,131
Year 10	17	5,436	4,045	2,763
Total	136	$ 44,000	$ 37,000	$ 30,000
Annualized			$ 4,300	$ 4,200

Manufacturer Net Benefits

This analysis concluded that the amendment of appendix A that allows manufacturers to use a steel ball when conducting Type I and Type II large object impact tests will reduce manufacturers' testing costs and technical development costs. Previously, these tests required the rectangular edge of an 8" by 8" by 16" cinder block weighing 24 lbs to strike a glazed window under specified conditions without penetrating the back side of the glass. Cinder blocks meeting these part 223 specification parameters are no longer manufactured. Therefore, in order to perform the large impact tests using a cinder block, materials engineers need to customize currently available cinder blocks. This additional customization step increases the testing labor burden by two hours, and increases the testing burden beyond what was anticipated when part 223 was promulgated.

The Volpe Center report discussed in the NPRM,[24] verified that a 12-lb steel ball can achieve the same kinetic energy as the cinder block. In addition, manufacturers may use the same steel ball for all glazing certification tests that they perform, while they must replace each cinder block after one glazing certification test because a cinder block's rectangular edge becomes damaged beyond repair during each Type I and Type II large object impact test. When estimating the manufacturers' labor and material net benefits

[24] 87 FR 22852.

that come from amending appendix A to allow for the steel ball test option, this analysis made the following assumptions:[25]

- Worldwide there are five railroad vehicle glazing manufacturers; three domestic and two foreign manufacturers.[26]
- Each domestic manufacturer will conduct five tests per year and will save approximately $500 per test. In total, the 3 domestic manufacturers will conduct 15 tests per year and save approximately $7,500 per year.
- Each cinder block is damaged and rendered unusable after each Type I and Type II large object impact test.
- Manufacturers will purchase and prepare four cinder blocks per test pass. Two cinder blocks per test pass are required; one cinder block for the Type I test and one cinder block for the Type II test. However, this analysis included two additional cinder blocks per test to ensure that manufacturers had extra cinder blocks on hand in case issues arose with the initial test pass.
- The cost of a cinder block is $1.50 or $6 for four cinder blocks.
- Each cinder block test requires 10 labor hours, e.g., 2 hours to customize the cinder block and 8 hours to run the cinder block test.
- After FRA implements this final rule, when conducting the Type I and Type II large object impact tests, all glazing manufacturers will use the steel ball option.
- Each steel ball costs $75. This analysis assumes each of the three domestic manufacturers will purchase one steel ball at the beginning of the first year of the analysis for a combined cost of $225. These one-time costs are subtracted from the year 1 net benefits shown in Table D. Steel ball costs are not included in Table C per test net benefits. FRA assumes that manufacturers will continue to

[25] Assumptions are based on expertise from FRA's Motive Power and Equipment Division.
[26] This analysis does not consider the impact on foreign manufacturers.

use the steel ball test option after year 10, but this analysis does not assign any residual value to the steel ball after the 10-year period of analysis.

- Materials engineers conduct the certification tests at a burdened hourly wage of $84.60.[27]

As shown in Table C, this analysis expects that each domestic window glazing manufacturer will save approximately $500 per test by using the steel ball test option in lieu of the existing cinder block test. Over the 10-year period of analysis, the three domestic manufacturers will realize a net benefit of about $65,000 (PV, 3%) or $54,000 (PV, 7%). The final rule will also result in unquantified environmental benefits as glazing manufacturers reduce the purchase and landfill disposal of cinder blocks, yet FRA lacks sufficient data to quantify these environmental benefits.

Table C. Manufacturer Net Benefits (2020 dollars)

Expense	Large Object Costs per Test	Labor Hours per Test	Labor Costs per Test	Total Costs per Test	Large Object Costs 15 Tests	Labor Costs 15 Tests	Total Costs per Year
Cinder block	$ 6	10	$ 847	$ 853	$ 90	$ 12,700	$12,790[28]
Steel Ball after first year	$ 0	4	$ 339	$ 339	$ 0	$ 5,080	$ 5,080[29]
Annual net benefits							$ 7,710
Net benefits per test							$ 514

Table D. Manufacturer Net Benefits by Year (2020 dollars)

Year	Number of Tests	Undiscounted	Present Value	
			3%	7%
Year 1	15	$ 7,474	$ 7,256	$ 6,985
Year 2	15	7,699	7,257	6,725
Year 3	15	7,699	7,046	6,285
Year 4	15	7,699	6,841	5,874
Year 5	15	7,699	6,641	5,489
Year 6	15	7,699	6,448	5,130
Year 7	15	7,699	6,260	4,795

[27] United States Bureau of Labor Statistics, Occupational Employment and Wages, May 2020, 17-2131 Materials Engineer, Materials engineer wage rate = $48.34. Materials engineer burdened rate = 1.75 * $48.34 = $84.60. Source: https://www.bls.gov/oes/2020/may/oes_nat.htm.

[28] Total cinder block tests cost per year = 15 * ($6 + $847) = $12,790, where $6.00 is the per test cinder block cost and $847 is the per test labor cost.

[29] The steel ball costs per test include 4 hours of labor. Four labor hours * $84.60 = $339. There are 15 tests per year. Labor cost of steel ball tests per year = 15 tests * $339 = $5,080.

Year 8	15	7,699	6,078	4,481
Year 9	15	7,699	5,901	4,188
Year 10	15	7,699	5,729	3,914
Total	150	$ 76,766	$ 65,456	$ 53,865

Potential Industry Cost Due to Legal Liability and Equipment Redesign or Retrofitting

FRA received one public comment about the economic impact that the proposed rule may have on the industry. APTA's comment expressed support for FRA's proposal to incorporate the identified waivers into the regulations and generally for the new steel ball testing option. However, APTA also expressed concern that the proposed steel ball test is more stringent than the existing cinder block test method. APTA asserted that, in order to pass the more stringent steel ball test, an entity may need to re-design or retrofit its railroad equipment in order to accommodate a thicker piece of glazing material. APTA's comment did not provide any evidence or analysis to support this assertion, nor did it specify the type of adjustments that an entity would need to make to railroad equipment or glazing material. Based on input from FRA subject matter experts, this analysis concluded that APTA's general comment about the need to redesign or retrofit equipment to accommodate thicker glass is without merit.

Proposal to Incorporate by Reference Two American Society for Testing and Materials Specifications

As relevant to the existing cinder block test in appendix A that FRA has historically required, in the proposed rule FRA planned to incorporate by reference two ASTM specifications (ASTM specifications C33/C33M-18 and C90-16a) to ensure proper cement construction and integrity of the blocks. Had FRA required manufacturers to comply with ASTM specification standards, manufacturers may have had a *de minimis* cost associated with purchasing the aforementioned ASTM standards, if the manufacturers did not currently subscribe to ASTM's standards subscription service. Upon further review and consideration, however, FRA recognizes that other concrete

compositions can be used to construct structurally sound cinder blocks. Accordingly, FRA is not adopting the NPRM's proposal to incorporate by reference the two ASTM standards so that only cinder blocks meeting those standards could be used under appendix A. Rather, FRA is revising appendix A to make clear that any structurally sound cinder blocks may be used to meet the testing requirements of appendix A. Therefore, ASTM specifications C33/C33M-18 and C90-16a are merely examples of compositions known to be structurally sound. Because this change from the NPRM to the final rule removes the proposed incorporation by reference of specific ASTM standards, there is no related cost. Also, the removal of the proposed incorporation by reference adds an unquantified benefit of additional flexibility to manufacturers with regard to where they may source cinder blocks.

Federal Government Net Benefits

Table E and Table F, below, estimate the Federal Government net benefits expected from this final rule. FRA will no longer receive numerous petitions from railroads requesting waiver from compliance with the window glazing requirements, which will save time and expense FRA previously spent on the waiver review and decision process. Specifically, as noted above, FRA currently oversees 68 glazing-related waivers, subject to renewal every five years. As part of the waiver process, an FRA inspector spends one to two days investigating each glazing waiver renewal request and reporting the findings. Additionally, an FRA subject matter expert spends one to two days reviewing the inspector's report and drafting a recommendation memorandum to the Safety Board and a notice to publish in the *Federal Register* for each waiver renewal request.

FRA estimates the net benefit from eliminating one railroad window glazing waiver review and decision is approximately $7,400 at the burdened wage rate. FRA net benefits estimates are based on the reduction of labor hours at the 2020 Office of

Personnel Management (OPM) pay grade levels as shown below.[30] Hours were considered at the burdened wage rate by multiplying the actual wage rate by 175 percent.

FRA's waiver review and decision typically require contributions from employees earning salaries at General Schedule (GS) pay grades 12, 14, and 15, and employees earning Senior Executive Service (SES) salaries. Table E shows the hours and wage rates for Government employees reviewing and issuing decisions for part 223 waiver requests.

Table E. FRA Waiver Review Wage Rates by General Schedule Pay Grades

		Burdened Wage Rate (Wage*1.75)	Hours	Total Unburden	Total Burden
GS-12 (RUS)	$41.66	$72.91	12	$500	$875
GS-12 (DCB)	$46.88	$82.04	4	$188	$328
GS-14 (DCB)	$65.88	$115.29	36	$2,372	$4,150
GS-15 (DCB)	$77.49	$135.61	8	$620	$1,085
SES	$87.26	$152.71	6	$524	$916
Total cost per waiver				$4,200	$7,400

Table F provides the yearly net benefits of eliminating the Federal Government's burden of reviewing 136 waivers over the next 10 years. Codifying the active glazing waivers will allow FRA inspectors to perform other essential inspection duties and will also allow headquarters staff to spend their time on other issues that may have a larger impact on maintaining and improving safety on the general railroad system.

Table F. Government Administrative Net Benefits by Year

			Discount Rate	
Year	Number of Waivers	Burdened Wage Rate Undiscounted	3%	7%
Year 1	8	$ 58,836	$ 57,123	$ 54,987

[30] U.S. Office of Personnel Management (OPM), 2020 Salaries & Wages. OPM general wage rates are listed here: GS 12 District Staff from Rest of the US (RUS) https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2020/RUS_h.pdf; GS 12, 13, 15 DOT Headquarters Staff from DC Metropolitan Area (DCB): https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2020/DCB_h.pdf; SES from Mid-Level III: https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2020/EX.pdf.

Year 2	11	80,900	76,256	70,661
Year 3	14	102,964	94,226	84,049
Year 4	18	132,382	117,620	100,994
Year 5	17	125,027	107,850	89,143
Year 6	8	58,836	49,275	39,205
Year 7	11	80,900	65,779	50,380
Year 8	14	102,964	81,280	59,926
Year 9	18	132,382	101,460	72,007
Year 10	17	125,027	93,032	63,558
Total	136	$ 1,000,219	$ 844,000	$ 685,000
Annualized			$ 99,000	$ 97,500

Over the 10-year period of analysis, the final rule will codify window glazing waivers, reduce window glazing manufacturers' window glazing certification costs, and eliminate the Federal Government's requirement to review and approve these waivers. The final rule will result in net benefits of $946,000 (PV, 3%) or $769,000 (PV, 7%).

Table G. Summary of Total Net Benefits over the 10-Year Period, rounded $1,000 (2020 Dollars)

		Present Value		Annualized	
Type of Benefit	Undiscounted	3%	7%	3%	7%
Railroads (Waiver Submissions)	$ 43,000	$ 37,000	$ 30,000	$ 4,000	$ 4,000
Manufacturers (Steel Ball Option)	77,000	65,000	54,000	8,000	8,000
Government (FRA Waiver Review)	1,000,000	844,000	685,000	99,000	98,000
Total Net Benefits	$ 1,121,000	$ 946,000	$ 769,000	$ 111,000	$ 109,000

B. Regulatory Flexibility Act and Executive Order 13272; Certification

The Regulatory Flexibility Act of 1980 (RFA) (5 U.S.C. 601 *et seq.*) and Executive Order 13272 (67 FR 53461, Aug. 16, 2002) require agency review of proposed and final rules to assess their impacts on small entities. When an agency issues a rulemaking proposal, the RFA requires the agency to "prepare and make available for public comment an initial regulatory flexibility analysis" which will "describe the impact of the proposed rule on small entities."[31] Section 605 of the RFA allows an agency to

[31] 5 U.S.C. 603(a).

certify a rule, in lieu of preparing an analysis, if the proposed rulemaking is not expected to have a significant economic impact on a substantial number of small entities. Out of an abundance of caution, FRA prepared an initial regulatory flexibility analysis (IRFA) to accompany the NPRM, which noted no expected significant economic impact on a substantial number of small entities. FRA made the IRFA available for public comment and did not receive any comments that related to small entities.

This final rule is amending Safety Glazing Standards for exterior windows on railroad equipment to codify long-standing waivers and add a new testing option to improve consistency of glazing testing. This final rule will apply to 58 of the 733 (8 percent) Class III railroads that are small entities and three manufacturers that are not small entities.[32] As enumerated in the IRFA and in the full Regulatory Impact and Notices section of this final rule, over the 10-year period of analysis, issuing this final rule will result in 136 fewer waiver requests by Class III railroads. The net benefit from this final rule that comes to Class III railroads is $30,000 (PV, 7%). Per year on average, this final rule will result in a net benefit of $51 for each affected Class III railroad. The final rule also includes a steel ball test method that manufacturers may use instead of the existing cinder block test method. However, the three domestic manufacturers impacted by this final rule are not small businesses.[33]

When developing the final rule, FRA considered the impact that the final rule would have on small entities. To provide flexibility in cinder block method testing, FRA

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[32] Based on the railroads that are required to report accident/incidents to FRA under part 225, FRA estimates there are approximately 768 Class III railroads, with 733 of them operating on the general system.

[33] North American Industry Classification System (NAICS) Code 327211 signifies the Flat Glass and Glazing Manufacturing Firms that would be affected by this proposal. Per SBA, any firm under NAICS code 327211 that employs more than 1,000 employees cannot qualify as a small business. See U.S. Small Business Administration, Table of Small Business Size Standards Matched to North American Industry Classification Codes, effective January 1, 2017. https://www.sba.gov/sites/default/files/2019/08/SBA%20Table%20of%20Size%20Standards_Effective%20Aug%2019%2C%202019.pdf

made a change from the NPRM to the final rule. In appendix A, FRA removed the proposed incorporation by reference of specific ASTM standards and made it clear that the use of any structurally sound cinder block meeting the required dimensions of appendix A is allowable for the large object impact test. This change provides additional flexibility in the sourcing of cinder blocks and also reduces the burden of manufacturers to obtain the stated ASTM specifications standard.

FRA received one public comment from APTA that relates to the impact that the NPRM may have on small entities. As stated above, FRA did not make any changes from the NPRM stage to the final rule stage in response to APTA's comment because APTA did not provide sufficient support for its claim that window frames would require retrofitting or redesigning as a result of this rule. Additionally, with regard to concerns about legal liability that APTA raised in its comment, FRA notes that a manufacturer may comply with the glazing test by using either the cinder block or steel ball.

Consistent with the findings of the IRFA, and a determination that the economic impact of the rule will not be significant, the FRA Administrator hereby certifies that this final rule will not have a significant economic impact on a substantial number of small entities.

Pursuant to the Congressional Review Act (5 U.S.C. § 801 et seq.), the Office of Information and Regulatory Affairs designated this rule as not a major rule, as defined by 5 U.S.C. 804(2).

C. Paperwork Reduction Act

FRA submitted the information collection requirements in this rule to OMB for approval under the Paperwork Reduction Act of 1995.[34] Please note that any revised requirements, as specified in this rule, are marked by asterisks (*) in the table below. The sections that contain the new and former information collection requirements under OMB

[34] 44 U.S.C. 3501 *et seq.*

Control No. 2130-0525 and the estimated time to fulfill each requirement are as follows:

CFR Section	Respondent universe	Total annual responses (A)	Average time per response (B)	Total annual burden hours (C) = A * B	Total cost equivalent (D) = C * wage rate[35]
223.3—Application—Locomotives, passenger cars, and cabooses built after 1945 used only for excursion, educational, recreational, or private transportation purposes.	733 railroads	400 marked tools (small hammers with instructions)	30 minutes	200.00 hours	$11,978.00
223.11(c)—Requirements for locomotives built or rebuilt prior to July 1, 1980, equipped with certified glazing in all locomotive cab windows (*Note: Revised requirement.*)	The rule will eliminate the need for railroads to submit waiver petitions (and repeated extensions of those waivers every 5 years) from part 223 for certain older railroad equipment and eliminate the Federal Government's need to review and approve the waiver petitions and extension requests.				
—(d)(1) Locomotive placed in designated service due to a damaged or broken cab window—Stenciled "Designated Service—DO NOT OCCUPY"	733 railroads	15 stencilings	3 minutes	.75 hour	$44.92
—(d)(2) Locomotives removed from service until broken or damaged windows are replaced with certified glazing	Glazing certification for locomotive replacement windows is done at the time of manufacturing. Consequently, there is no additional burden associated with this requirement.				
223.13(c)—Requirements for cabooses built or rebuilt prior to July 1, 1980, equipped with certified glazing in all windows (*Note: Revised requirement.*)	The rule will eliminate the need for railroads to submit waiver petitions (and repeated extensions of those waivers every 5 years) from part 223 for certain older railroad equipment and eliminate the Federal Government's need to review and approve the waiver petitions and extension requests.				
—(d) Cabooses removed from service until broken or damaged windows are replaced with certified glazing	Glazing certification for caboose replacement windows is done at the time of manufacturing. Consequently, there is no additional burden associated with this requirement.				
223.15(c)—Requirements for passenger cars built or rebuilt prior to July 1, 1980, equipped with certified glazing in all windows plus four emergency windows (*Note: Revised requirement. Those passenger cars operating at Class 3 speeds (or higher) will need still need to submit a waiver; for those operating below Class 3 speeds, the	733 railroads	1 renewal waiver	4 hours	4.00 hours	$309.76

[35] The dollar equivalent cost is derived from the STB's 2020 Full Year Wage A&B data series using the appropriate employee group hourly wage rate that includes a 75-percent overhead charge.

rule will eliminate the need for the passenger railroads to submit waiver petitions.*)					
—(d) Passenger cars removed from service until broken/damaged windows are replaced with certified glazing	Glazing certification for passenger car replacement windows is done at the time of manufacturing. Consequently, there is no additional burden associated with this requirement.				
Appendix A—(b)(16)—Certification of Glazing Materials—Manufacturers to certify in writing that glazing material meets the requirements of this section	3 manufacturers	10 certifications	30 minutes	5.00 hours	$387.20
—(c) Identification and marking of each unit of glazing material	3 manufacturers	25,000 marked pieces	480 pieces per hour	52.08 hours	$3,119.07
Total	733 railroads + 3 manufacturers	25,426 responses	N/A	262 hours	$15,839

All estimates include the time for reviewing instructions; searching existing data sources; gathering or maintaining the needed data; and reviewing the information. For information or a copy of the paperwork package submitted to OMB, contact Ms. Hodan Wells, Information Collection Clearance Officer, at 202-868-9412, or at Hodan.Wells@dot.gov.

OMB is required to make a decision concerning the collection of information requirements contained in this rule between 30 and 60 days after publication of this document in the *Federal Register*. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

FRA is not authorized to impose a penalty on persons for violating information collection requirements that do not display a current OMB control number, if required. The current OMB control number is 2130-0525.

D. Federalism Implications

Executive Order 13132, Federalism,[36] requires FRA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." Under Executive Order 13132, the agency may not issue a regulation with federalism implications that imposes substantial direct compliance costs and that is not required by statute, unless the Federal Government provides the funds necessary to pay the direct compliance costs incurred by State and local governments or the agency consults with State and local government officials early in the process of developing the regulation. Where a regulation has federalism implications and preempts State law, the agency seeks to consult with State and local officials in the process of developing the regulation.

FRA has analyzed this rule in accordance with the principles and criteria contained in Executive Order 13132. FRA has determined that this rule has no federalism implications, other than the possible preemption of State laws under 49 U.S.C. 20106. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply, and preparation of a federalism summary impact statement for this final rule is not required.

E. International Trade Impact Assessment

The Trade Agreements Act of 1979 prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international

[36] 64 FR 43255 (Aug. 10, 1999).

standards and, where appropriate, that they be the basis for U.S. standards. This rule is not expected to affect trade opportunities for U.S. firms doing business overseas or for foreign firms doing business in the United States.

F. Environmental Impact

FRA has evaluated this rule consistent with the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality's NEPA implementing regulations at 40 CFR parts 1500–1508, and FRA's NEPA implementing regulations at 23 CFR part 771 and determined that it is categorically excluded from environmental review and therefore does not require the preparation of an environmental assessment (EA) or environmental impact statement (EIS). Categorical exclusions (CEs) are actions identified in an agency's NEPA implementing regulations that do not normally have a significant impact on the environment and therefore do not require either an EA or EIS.[37] Specifically, FRA has determined that this rule is categorically excluded from detailed environmental review pursuant to 23 CFR 771.116(c)(15), "[p]romulgation of rules, the issuance of policy statements, the waiver or modification of existing regulatory requirements, or discretionary approvals that do not result in significantly increased emissions of air or water pollutants or noise."

The main purpose of this rule is to revise FRA's Safety Glazing Standards to maintain and in some cases enhance safety, while reducing unnecessary costs and providing regulatory flexibility. This rule will not directly or indirectly impact any environmental resources and will not result in significantly increased emissions of air or water pollutants or noise. In analyzing the applicability of a CE, FRA must also consider whether unusual circumstances are present that would warrant a more detailed environmental review.[38] FRA has concluded that no such unusual circumstances exist

[37] 40 CFR 1508.4.
[38] 23 CFR 771.116(b).

with respect to this rule, and it meets the requirements for categorical exclusion under 23 CFR 771.116(c)(15).

Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, FRA has determined this undertaking has no potential to affect historic properties.[39] FRA has also determined that this rule does not approve a project resulting in a use of a resource protected by Section 4(f).[40]

G. Executive Order 12898 (Environmental Justice)

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," and DOT Order 5610.2C require DOT agencies to achieve environmental justice as part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including interrelated social and economic effects, of their programs, policies, and activities on minority populations and low-income populations. The DOT Order instructs DOT agencies to address compliance with Executive Order 12898 and requirements within the DOT Order in rulemaking activities, as appropriate, and also requires consideration of the benefits of transportation programs, policies, and other activities where minority populations and low-income populations benefit, at a minimum, to the same level as the general population as a whole when determining impacts on minority and low-income populations. FRA has evaluated this rule under Executive Order 12898 and the DOT Order and has determined it will not cause disproportionately high and adverse human health and environmental effects on minority populations or low-income populations.

H. Unfunded Mandates Reform Act of 1995

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[39] *See* 54 U.S.C. 306108.

[40] *See* Department of Transportation Act of 1966, as amended (Pub. L. 89-670, 80 Stat. 931); 49 U.S.C. 303.

Under section 201 of the Unfunded Mandates Reform Act of 1995,[41] each Federal agency "shall, unless otherwise prohibited by law, assess the effects of Federal regulatory actions on State, local, and tribal governments, and the private sector (other than to the extent that such regulations incorporate requirements specifically set forth in law)." Section 202 of the Act (2 U.S.C. 1532) further requires that "before promulgating any general notice of proposed rulemaking that is likely to result in promulgation of any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any 1 year, and before promulgating any final rule for which a general notice of proposed rulemaking was published, the agency shall prepare a written statement" detailing the effect on State, local, and tribal governments and the private sector. This rule will not result in the expenditure, in the aggregate, of $100,000,000 or more (as adjusted annually for inflation) in any one year, and thus preparation of such a statement is not required.

I. Energy Impact

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," requires Federal agencies to prepare a Statement of Energy Effects for any "significant energy action."[42] FRA evaluated this rule under Executive Order 13211 and determined that this regulatory action is not a "significant energy action" within the meaning of Executive Order 13211.

List of Subjects in 49 CFR Part 223

Glazing standards, Penalties, Railroad safety, Reporting and recordkeeping requirements.

The Final Rule

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[41] Pub. L. No. 104-4, 2 U.S.C. 1531.
[42] 66 FR 28355 (May 22, 2001).

For the reasons discussed in the preamble, FRA is amending part 223 of title 49, Code of Federal Regulations, as follows:

PART 223—SAFETY GLAZING STANDARDS—LOCOMOTIVES, PASSENGER CARS AND CABOOSES

1. The authority citation for part 223 continues to read as follows:

Authority: 49 U.S.C. 20102-20103, 20133, 20701-20702, 21301-21302, 21304; 28 U.S.C. 2461 note; and 49 CFR 1.89.

2. Amend § 223.3 by:

a. Removing the semicolon at the end of paragraph (b)(1) and adding a period in its place; and

b. Adding paragraph (b)(5).

The addition reads as follows:

§ 223.3 Application.

* * * * *

(b) * * *

(5) Locomotives, cabooses, and passenger cars built or rebuilt prior to July 1, 1980, that are operated at speeds not exceeding 30 mph, and used only where the risk of propelled or fouling objects striking the equipment is low. Risk is presumed low, unless the railroad operating the equipment has knowledge, or FRA makes a showing, that specific risk factors exist. Risk factors include reported incidents of propelled or fouling objects striking rail equipment, or infrastructure conditions or other operating environment conditions that have led or are likely to lead to objects striking rail equipment in operation.

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3. Amend § 223.9 by revising the section heading to read as follows:

§ 223.9 Requirements for equipment built or rebuilt after June 30, 1980.

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4. Amend § 223.11 by revising the section heading to read as follows:

§ 223.11 Requirements for locomotives built or rebuilt prior to July 1, 1980.

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5. Amend § 223.13 by revising the section heading to read as follows:

§ 223.13 Requirements for cabooses built or rebuilt prior to July 1, 1980.

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6. Amend § 223.15 by revising the section heading to read as follows:

§ 223.15 Requirements for passenger cars built or rebuilt prior to July 1, 1980.

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7. Amend appendix A to part 223 by revising paragraphs b.(6), (10), (11), (13), and (15) to read as follows:

Appendix A to Part 223—Certification of Glazing Materials

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b. * * * * *

(6) The Witness Plate shall be an unbacked sheet of maximum 0.006-inch, alloy 1100 temper O, aluminum stretched within the perimeter of a suitable frame to provide a taut surface. If a steel ball is used for Large Object Impact testing, the Witness Plate shall be an unbacked sheet of maximum 0.002-inch, alloy 1145 temper H19 or equivalent, aluminum stretched within the perimeter of a suitable frame to provide a taut surface.

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(10) The Test Specimen for glazing material that is intended for use in end facing glazing locations shall be subjected to a Type I test regimen consisting of the following tests:

(i) Ballistic Impact: A standard 22 caliber long rifle lead bullet of 40 grains in weight impacts at a minimum velocity of 960 feet per second.

(ii) Large Object Impact:

(A) A cinder block weighing a minimum of 24 lbs with dimensions of 8 inches by 8 inches by 16 inches nominally impacts the glazing surface at the corner of the block at a minimum velocity of 44 feet per second. The cinder block must be of composition making it structurally sound, such as referenced in ASTM, International (ASTM) Specification C33 or ASTM C90; or

(B) A steel ball (e.g., ball bearing or shot put) weighing a minimum of 12 lbs impacts the glazing surface at a minimum velocity of 62.5 feet per second.

(11) The Test Specimen for glazing material that is intended for use only in sidefacing glazing locations shall be subjected to a Type II test regimen consisting of the following tests:

(i) Ballistic Impact: A standard 22 caliber long rifle lead bullet of 40 grains in weight impacts at a minimum velocity of 960 feet per second.

(ii) Large Object Impact:

(A) A cinder block weighting a minimum of 24 lbs with dimensions of 8 inches by 8 inches by 16 inches nominally impacts the glazing surface at the corner of the block at a minimum velocity of 12 feet per second. The cinder block must be of composition making it structurally sound, such as referenced in ASTM C33-18 or ASTM C90; or

(B) A solid steel ball (e.g., ball bearing or shot put) weighing a minimum of 12 lbs impacts the glazing surface at a minimum velocity of 17 feet per second.

* * * * *

(13) Except as provided in paragraphs b.(10)(ii)(B) and b.(11)(ii)(B) of this appendix, two different test specimens must be subjected to the large object impact

portion of the tests. For purposes of paragraphs b.(10)(ii)(B) and b.(11)(ii)(B), four different test specimens shall be subjected to each impact test.

* * * * *

(15) Except as provided in paragraphs b.(10)(ii)(B) and b.(11)(ii)(B) of this appendix, test specimens must consecutively pass the required number of tests at the required minimum velocities. Individual tests resulting in failures at greater than the required minimum velocities may be repeated but a failure of an individual test at less than the minimum velocity shall result in termination of the total test and failure of the material. For purposes of paragraphs b.(10)(ii)(B) and b.(11)(ii)(B), three out of four test specimens must pass the test for the glazing material to be acceptable. Individual tests resulting in a failure at velocities above the prescribed range may be repeated.

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Issued in Washington, D.C.

Amitabha Bose,
Administrator.

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